



# SOFTWARE TESTING

## Certificate Programs



**VILLANOVA**  
UNIVERSITY

**Professional Education  
Certificate Programs  
2006 - 2007 Catalog**



# Software Testing Certificate Program

## Strengthen Software Quality – and Your Career!

The complexity of today's software, along with its decreasing average product life expectancy, has greatly increased the economic costs of errors. Software bugs are so prevalent and detrimental that they cost the U.S. economy an estimated \$59.5 billion annually, according to the Department of Commerce. Villanova University's Software Testing program helps IT professionals, or those who want to transition into the software testing part of the IT field, become highly productive and effective testing professionals, managers and leaders. Three eight-week courses prepare you for today's rigorous testing demands while providing powerful tools and techniques to help you earn industry-recognized certification from the International Software Testing Qualifications Board (ISTQB®).

## Who Should Enroll?

This certificate program is ideal for test analysts, test engineers, test consultants, test managers, user acceptance testers, software developers or other IT professionals who may be expected to obtain advanced credentials.

The master certificate is made up of three eight-week courses:

- Essentials of Software Testing
- ISTQB® Software Testing Capstone
- One Elective (See chart on page 3)

Professionals who complete all three courses will earn their **Master Certificate in Software Testing** from Villanova University — the worldwide leader in online professional education.

**“The impact of software errors is enormous because virtually every business in the United States now depends on software for the development, production, distribution, and after-sales support of products and services.”**

*Arden Bement*

*Director, National Institute of Standards & Technology  
U.S. Department of Commerce*

## SUPERIOR ONLINE LEARNING



**Anytime, Anywhere, 24/7**

## Online Streaming Video Lectures

Bring your PC to life and the classroom to you, with an educational experience that no other Internet program can match! You will actually watch and listen to the very same professionals who teach on campus as they deliver lectures and course material online — *when and where it's convenient for you!*

## Collaboration Tools

- 2-way voice-over IP
- Instant messaging
- Shared virtual whiteboards
- Chat rooms
- Internet message boards
- Email

## 3 Ways to Enroll

**Call:** 800-571-4938 (+1 813-612-4296)

**Click:** [www.VillanovaU.com](http://www.VillanovaU.com)

**Mail:** 9417 Princess Palm Ave.  
Tampa, FL 33619-8313

**Classes Start Monthly**



## Lead the Charge to Reduce Costly Software Mistakes

### Become an Expert – Earn a Master Certificate!

Want to make an impact in business today? Expand your knowledge while preparing for industry certification! Stay current on industry trends and technology by earning your master certificate online — the surest and fastest way to gain professional expertise along with the most in-demand skills that can be used right away.

Obtaining a master certificate demonstrates thorough software testing understanding as well as a solid commitment to continuing education. The three eight-week courses in the master certificate track provide valuable skills and credentials that can be applied immediately on the job.

### Get Certified!

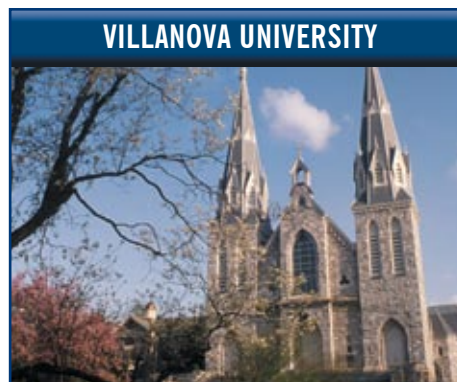
If you think continuing education won't impact your income, consider this: Industry-recognized certification helps professionals boost their salaries by 16%, according to the 2005 salary survey by *Certification* magazine. The courses in Villanova's Software Testing program prepare you for certification from the ISTQB®. By becoming an ISTQB Certified Tester, you will distinguish yourself as someone who knows how to apply sound software testing techniques and principles to reduce defects, improve quality and enhance business success. Certification acknowledges that you have mastered the newly-acquired subject matter and demonstrate a commitment to professional excellence. You'll come away with a feeling of prestige, respect and accomplishment by earning a Villanova master certificate and obtaining the stature associated with industry certification.

### Unmatched Expertise

The software testing classes from Villanova's online programs were developed and are led by Rex Black, the current president of both the ISTQB® and the ASTQB® (American Software Testing Qualification Board), and a world-renown expert in software and systems testing.

### Software Testing

Figure 1



Villanova University was recently ranked the #1 University in the North for the 17<sup>th</sup> time by *U.S. News & World Report*\*.

Founded in 1842, Villanova University is located in Villanova, PA (just outside of Philadelphia) on a beautiful 254-acre, tree shaded campus. Villanova University is a traditional, regionally accredited, long standing university with over 82,000 alumni, NCAA Division I athletic teams, unparalleled academic and technical support and an outstanding full-time faculty, 90 percent of whom hold the highest degree in their field.

Villanova University is accredited by the Middle States Association of Colleges and Secondary Schools.

Villanova University offers a variety of online certificate programs in various disciplines: *Project Management, Six Sigma, Contract Management, IS Security, Business Analysis, Software Testing, Human Resources, Phillips ROI Methodology™, Leadership, and Finance and Accounting for the Non-Financial Manager.*

\* Best Universities – Master's, North Region category

### Tuition Assistance

Many companies recognize the need for their employees to enhance their skill base and advance their education by providing tuition assistance. Financial Aid programs are also available to you. For more information, please contact your HR Department or call (toll free)

**800-571-4938**

Corporate programs are available.

\* Electives include: Project Management for IS/IT Professionals, Maximizing Team Effectiveness for the IS/IT Project Manager, Essentials of Business Analysis and Essentials of IS Security.



## Certificate Course Descriptions & Tuition

### Master Certificate in Software Testing

These comprehensive courses prepare professionals to achieve industry-recognized certification from the International Software Testing Qualifications Board (ISTQB®).

#### Required Courses:

- Essentials of Software Testing
- ISTQB® Software Testing Capstone

#### One of the Following:

- Project Management or IS/IT Professionals
- Maximizing Team Effectiveness for the IS/IT Project Manager
- Essentials of Business Analysis
- Essentials of IS Security

Price ..... \$4,995

### Essentials of Software Testing

Without reliable software, everything from air traffic control to the television remote control could grind to a halt. *Essentials of Software Testing* provides knowledge, skills and techniques that will enable you to strengthen your expertise in critical areas.

#### Key Topics:

##### Fundamentals of Testing

- Steps of the testing process
- How software testing finds and prevents defects

##### Testing Throughout the Software Lifecycle

- Software development models
- Regression testing and impact analysis in maintenance

##### Static Techniques

- Static review techniques in the design phase
- Four primary types of reviews

##### Test Design Techniques

- Core of Software Testing Body of Knowledge (TBOK)
- Conducting a comprehensive risk analysis

##### Test Management

- Test progress monitoring and controlling techniques
- Ten steps for writing effective reports

##### Tool Support for Testing

- Benefits and risks of test automation
- How to successfully deploy a testing tool throughout the organization

40 PDUs, 4.0 CEUs Price ..... \$1,980

### ISTQB® Software Testing Capstone

This capstone course to the **Master Certificate in Software Testing** program will help you build upon the concepts and skills you learned in *Essentials of Software Testing*. Designed for students who are preparing to take the ISTQB® Certified Tester examination, this eight-week course includes a series of practice tests modeled after the actual ISTQB® Certified Tester Foundation Level (CTFL) exam. These practice exams with hundreds of questions can be repeated as many times as you like during the course, giving you many opportunities to improve your knowledge, build your confidence, and refine your test-taking skills.

#### Key Topics:

##### Fundamentals of Testing

- General testing principles that guide software testing efforts
- Psychology of software testing

##### Testing Throughout the Software Lifecycle

- Objectives and targets for software testing
- The CMMI Process Maturity Model

##### Static Techniques

- Steps that make up the IEEE 1028 Standard for software reviews
- Static analysis tools

##### Test Design Techniques

- Contents of the IEEE 829 Standard for Software Test Documentation
- Specification-based (black box), structure-based (white box) and experience-based testing

##### Test Management

- Selecting the proper test strategy
- Impact of risk analysis and risk management on test planning

##### Tool Support for Testing

- Opportunities and risks associated with using test tools
- Factors to consider when introducing test tools

40 PDUs, 4.0 CEUs Price..... \$1,480

Corporate programs are available.  
Please call 800-571-4938 for more  
information.

Prices subject to change without notice or obligation.  
Shipping charges for course materials are not included.





## Villanova Online Faculty and Practicing Professionals

Courses taught by Villanova University online faculty and staff bring a wealth of knowledge and real-world experience to instructional development and delivery. Their expertise and interactive teaching methods create a dynamic experience where participants use a proven combination of “virtual classroom” tools, online instructor-led discussions and streaming video.

### Rex Black, CTFL/CTAL

A 20-year software and systems engineering veteran, Black is President and Principal Consultant of RBCS, Inc., a leader in software, hardware and systems testing. His clients span 16 countries on four continents, including Adobe (India), ASB Bank, Bank One, Cisco, Comverse, Dell, the U.S. Department of Defense, Hitachi, NDS, Reef, and Schlumberger. He is the author of *Managing the Testing Process*, now in its second edition, and *Critical Testing Processes*, which was published at the end of 2003. Black has also written numerous articles, along with presenting papers, seminars, and speeches at various U.S. and international conferences. He is the President of the American Software Testing Qualification Board (ASTQB), and President of the International Software Testing Qualification Board (ISTQB®).

### Judy McKay, CTFL

Judy McKay has spent the last 20 years working in the technology industry with particular focus on software quality assurance. She has managed departments encompassing all aspects of the software lifecycle, including requirements design and analysis, software development, database design, software quality assurance, software testing, technical support, configuration management and technical publications. Her career has spanned across commercial software companies, aerospace, foreign-owned R&D and various Internet companies. McKay has been conducting training seminars nationwide for five years. Her well-accepted, enjoyable and informative courses are based on the real-world application of practical data.

### THE UNIVERSITY ALLIANCE



With more than 300,000 enrollments, the University Alliance Online is the nation's largest exclusive e-learning provider of degree and certificate programs from accredited universities. The University Alliance Online includes: Villanova University, University of Notre Dame's Mendoza College of Business, Tulane University's Freeman School of Business, Thunderbird – The Garvin School of International Management, University of South Florida, Regis University, Florida Institute of Technology, The University of Scranton, Saint Leo University and Jacksonville University.

The University Alliance Online works with leading universities to transform their classroom curricula into dynamic online programs designed to offer the optimal learning experience.

To help you achieve your goals, you will be assigned a University Alliance Online program representative who will work closely with you to address any non-academic issues. They will also contact you during the term to help you enroll in your next class.

You will develop a close working relationship with your program representative. You are encouraged to take advantage of the full range of services provided.

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